

IN THE CLAIMS

The current claims follow. For claims not marked as amended in this response, any difference in the claims below and the previous state of the claims is unintentional and in the nature of a typographical error.

1. (Currently Amended) For use in a point-to-multipoint wireless network, a base station for transmitting downstream data packets in a downstream traffic channel to customer premises equipment (CPE) devices and receiving upstream data packets in an upstream traffic channel from said CPE devices,

wherein said base station is capable of:

for each of a plurality of said CPE devices, establishing a plurality of associated queues;

receiving a link management message from a first one of said plurality of CPE devices, the link management message requesting a change in bandwidth allocation for an identified queue associated with said first CPE device, wherein said link management message is associated with a wireless media access control (MAC) layer protocol; and

in response to said link management message, re-allocating bandwidth from a first queue associated with said first CPE device to a second queue.

~~determining a queue status of at least one queue associated with at least one application in each of said CPE devices from a link management message associated with a wireless media access control (MAC) layer protocol;~~

~~wherein said queue status is at least one of: a queue priority and a traffic type and, in response to said determination, said base station is capable of re-allocating bandwidth from a first queue associated with a first CPE device to a second queue.~~

2. (Original) The base station as set forth in Claim 1 wherein said second queue is associated with said first CPE device.

3. (Currently Amended) The base station as set forth in Claim 1 wherein said second queue is associated with a second CPE device of said plurality of CPE devices separate from said first CPE device.

4. (Original) The base station as set forth in Claim 1 wherein said base station allocates bandwidth to said second queue by transmitting a first downstream data packet, wherein said first downstream data packet comprises a Next Time Slot field capable of assigning a CPE device associated with said second queue to transmit an upstream data packet in said upstream traffic channel during a next time slot following receipt of said first downstream data packet.

5. (Original) The base station as set forth in Claim 4 wherein said Next Time slot field is part of a header of said first downstream data packet.

6. (Original) The base station as set forth in Claim 4 wherein said first downstream data packet comprises a payload of data directed to said first CPE device.

7. (Original) The base station as set forth in Claim 4 wherein said first downstream data packet comprises a payload of data directed to a CPE device other than said first CPE device.

8. (Currently Amended) A point-to-multipoint wireless network comprising a plurality of base stations, wherein each of said base stations transmits downstream data packets in a downstream traffic channel to customer premises equipment (CPE) devices and receives upstream data packet in an upstream traffic channel from said CPE devices,

wherein said each base station is capable of:

for each of a plurality of said CPE devices, establishing a plurality of associated queues;

receiving a link management message from a first one of said plurality of CPE devices, the link management message requesting a change in bandwidth allocation for an identified queue associated with said first CPE device, wherein said link management message is associated with a wireless media access control (MAC) layer protocol; and

in response to said link management message. re-allocating bandwidth from a first queue associated with said first CPE device to a second queue.

~~determining a queue status of at least one queue associated with at least one application in each of said CPE devices from a link management message associated with a wireless media access control (MAC) layer protocol, wherein said queue status is at least one of: a queue priority and a traffic type and,~~

~~in response to said determination, said each base station is capable of re-allocating bandwidth from a first queue associated with a first CPE device to a second queue.~~

9. (Original) The point-to-multipoint wireless network as set forth in Claim 8 wherein said second queue is associated with said first CPE device.

10. (Currently Amended) The point-to-multipoint wireless network as set forth in Claim 8 wherein said second queue is associated with a second CPE device of said plurality of CPE devices separate from said first CPE device.

11. (Original) The point-to-multipoint wireless network as set forth in Claim 8 wherein said each base station allocates bandwidth to said second queue by transmitting a first downstream data packet, wherein said first downstream data packet comprises a Next Time Slot field capable of assigning a CPE device associated with said second queue to transmit an upstream data

packet in said upstream traffic channel during a next time slot following receipt of said first downstream data packet.

12. (Original) The point-to-multipoint wireless network as set forth in Claim 11 wherein said Next Time slot field is part of a header of said first downstream data packet.

13. (Original) The point-to-multipoint wireless network as set forth in Claim 11 wherein said first downstream data packet comprises a payload of data directed to said first CPE device.

14. (Original) The point-to-multipoint wireless network as set forth in Claim 11 wherein said first downstream data packet comprises a payload of data directed to a CPE device other than said first CPE device.

15. (Currently Amended) For use in a base station of a point-to-multipoint wireless network, the base station capable of communicating with a plurality of customer premises equipment (CPE) devices, a method of reallocating bandwidth among the CPE devices comprising the steps of:
transmitting downstream data packets in a downstream traffic channel to the CPE devices;
receiving upstream data packets in an upstream traffic channel from the CPE devices;
for each of a plurality of the CPE devices, establishing a plurality of associated queues;

receiving a link management message from a first one of the plurality of CPE devices, the link management message requesting a change in bandwidth allocation for an identified queue associated with said first CPE device, wherein said link management message is associated with a wireless media access control (MAC) layer protocol; and

in response to the link management message, re-allocating bandwidth from a first queue associated with the first CPE device to a second queue.

~~determining a queue status of at least one queue associated with at least one application in each of the CPE devices from a link management message associated with a wireless media access control (MAC) layer protocol, wherein said queue status is at least one of: a queue priority and a traffic type; and~~

~~in response to the determination, reallocating bandwidth from a first queue associated with a first CPE device to a second queue.~~

16. (Currently Amended) The method as set forth in Claim 15 wherein the second queue is associated with one of: i) the first CPE device and 2) a second CPE device of the plurality of CPE devices separate from the first CPE device.

17. (Original) The method as set forth in Claim 15 wherein the step of reallocating bandwidth comprises the sub-step of:

transmitting a first downstream data packet, wherein the first downstream data packet comprises a Next Time Slot field capable of assigning a CPE device associated with the second queue to transmit an upstream data packet in the upstream traffic channel during a next time slot following receipt of the first downstream data packet.

18. (Original) The method as set forth in Claim 17 wherein the Next Time slot field is part of a header of the first downstream data packet.

19. (Original) The method as set forth in Claim 17 wherein the first downstream data packet comprises a payload of data directed to the first CPE device.

20. (Currently Amended) A customer premises equipment (CPE) device for use in a point-to-multipoint wireless network comprising a plurality of base stations, said CPE device capable of:

transmitting upstream data packets in an upstream traffic channel to a first one of said plurality of base station;~~and~~

receiving downstream data packets in a downstream traffic channel from said first base station; and

establishing a plurality of queues associated with said first base station,

wherein said CPE device detects in a first downstream data packet a Next Time Slot field assigning said CPE device to transmit a first upstream data packet in said upstream traffic channel during a next time slot following receipt of said first downstream data packet, and

wherein said CPE device transmits in a header of said first upstream data packet a request for a change in bandwidth allocation for one of said plurality of queues ~~a first queue status associated a first queue in said CPE device.~~